

# ZJER

**ZIMBABWE JOURNAL OF EDUCATIONAL RESEARCH**

**Volume 25 Number 2**  
**July 2013**



**UNIVERSITY OF ZIMBABWE**

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# **Determinants of School Attendance among Children with Disability in Zimbabwe and Implication on Disability Policy**

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## **Abstract**

*This article reviews the factors which influence school attendance among children living with disabilities and their impact on disability policy in Zimbabwe. The data for this analysis was collected in several districts of Zimbabwe. Logit regression model shows that gender of the child living with disability, the ability to speak, attitudes of parents and their membership of a support group heavily influence the schooling of children with disabilities. This finding contradicts the provisions of the disability policy which advocate for the inclusion of all disabled persons in all issues concerning their welfare. It is clear that Zimbabwean society continues to exclude disabled children in attaining education and this is exacerbated by lack of clear policies and enforcement of regulations towards the realisation of human rights among children living with disability.*

## **Introduction**

About 10% of the world population live with a physical, sensory (blindness and deafness), intellectual or mental health disability (Groce & Bakshi, 2009). According to UNESCO (1994), 97% of the disabled people have never attended school or have dropped out of school at an early stage of learning. The Salamanca Statement and Framework for Action on Special Needs Education and the Convention on the Rights of Persons with Disabilities urges governments to ensure an inclusive education system at all levels (UNESCO, 1994). Over the years, governments have made significant progress in both legislation and programming at local and national levels to improve the attendance of children living with disability. However, despite these national efforts, Sutherland (1981) notes that there is a very low school attendance rate among children living with disability. If this persists, it will be very difficult to break the link between poverty and disability. All government efforts such

as the Basic Education Assistance Module (BEAM) and the Black Economic Empowerment and Indigenisation Act will be of little use if children living with disability do not get any form of education at this stage. This paper argues that unless factors that constrain children living with disability from attending school are known and addressed, the Zimbabwe government's effort of an inclusive education system will be misdirected. The paper therefore seeks to establish factors that determine school attendance among children living with disability. After identifying these factors, we also seek to understand how the government of Zimbabwe is addressing them.

### **Research methods**

Data used in this study was collected by the Centre for Applied Social Sciences at the University of Zimbabwe in 2011. For quantitative information collection, structural questionnaires were administered to a sample of 2000 households living with a child or children with a disability. The study was carried out throughout Zimbabwe covering urban areas (Harare, Kadoma, Gweru, Masvingo, Bulawayo, Mutare), rural areas (Rusape, Gokwe, Nkwali, Nkayi, Murehwa, Musami, Mudzi), mining settlements (Mhangura and Alaska), commercial farms (Mhangura and Chinhoyi areas) and peri-urban areas (Ruwa and Domboshava). It looked at caregivers of children and adolescents with disabilities. The complete list of households was drawn from selected villages in selected districts to generate a sampling frame. Analysis used in this paper is based on a sub sample of 200 households where the disabled person is of school going age. The questionnaire guided the collection of information on household characteristics, details of the children living with disability; reactions of community and parents to disability; access to education and; livelihoods and economic status of parents of children living with disability.

### **Data analysis**

Data were analysed using STATA 11.2. The descriptive analysis covers means and standard deviations to provide distribution across contextual variables. For hypothesis testing, t and Z tests were used. Logit regression analysis was used to determine the factors that

affect households' decision to send a child living with disability to school. Before running the analysis test multi-collinearity was conducted to determine if there were highly correlated independent variables.

### **Theoretical framework**

Birdsall et al. (2005) claim that only around five percent of the world's children who have some form of disability complete primary schooling; many never enrol or dropout very early. Disability, therefore, remains an important issue to be tackled both in terms of access to school and progression through to successful completion of basic education. Rural children with disability have a slightly lower probability of attending school than urban non-disabled children (Jackson, 1993). This could be because of the disparities in infrastructure, availability, accessibility and affordability of assistive devices.

According to UNESCO (2010), a child with a disability is 40% less likely to be attending primary school than a non-disabled child. There are several reasons why children with disabilities are less likely to attend school than their non-disabled peers. Dorman (cited in Bruun & Ingstad, 1990) notes that in some cultures it is assumed that a child born with an identifiable disability does not need education. In other cultures, it is anticipated that a child with a disability would learn with great difficulties (Dorman, cited in Bruun & Ingstad, 1990). Efforts are then made to educate non-disabled children and economically empower them to support the disabled child (Oliver, 1990; Poyadue, 2004). Where uniform and fees are required, poor parents choose to educate their non-disabled children assuming that it would be a waste of resources to educate children with disabilities (Chimedza, 1998).

Another important aspect of the life of children within the household is the relationship with their parents, in particular the support given by parents with the child's schooling and the perceptions of parents about the potential benefits of education for their children (Ananga, 2011). It is evident that parental support for children with disabilities towards their education is minimal, if any. A study by Liu (2004) in

China found that the majority of parents were indifferent about their children dropping out from school and left the schooling decision to the child, particularly for older children. Liu (2004) suggested that parents do not want to be blamed by the child for not continuing in education, particularly those living with disabilities coming from resource constrained families.

The direct and indirect costs of schooling can exclude some children from school. One of the most important direct costs underlying the process of dropping out is school fees where these are levied. Thus school fees were found to be a potent reason for school dropout among children with disabilities. Hunter and May (2002) observe that many countries have now adopted free fee for the basic education to encourage children with disability to attend school. Some have also introduced capitation systems to offset the loss in school income. But other charges and indirect costs continue to be an obstacle to enrolment of disabled children from the poorest households (Lewin, 2008).

Getting assistive devices is also a deterrent factor to school attendance among disabled children particularly those from poor socio-economic families (Bowser and Reed, 2000). Children with mobility impairments often cannot physically walk to school, or up the stairways into the classroom, deaf and blind children find that without sign language interpretation, large print or braille, they cannot follow lessons. Although children with disability are enrolled in school, they might be excluded from lessons (Oliver, 1990). Many leave after only a few months or years because they gain little from the experience.

Family income is directly linked to the affordability of education and as such has a direct impact on whether children attend education (Hadley, 2010). If children do attend school, changes in the household financial situation, as reflected by the volatility of family income, may force parents to remove some children out of school. Under these circumstances, children living with disability are the ones likely to suffer from such a decision. Thus, parents from poor socio-economic backgrounds tend to send their non- disabled

children to school with the assumption that they would assist their siblings with disability in the event that they reach old age or die (Edelson, 2010).

In the developed world there are a variety of support groups which bring together experts and parents whose children have some disability, in order to provide care, advice, education and understanding. There is evidence that these support groups help in shaping the parents' decision of sending the children with disabilities to school or not. For example, the Centre for Disease Control narrated the experience of parent-to-parent support group in the United States of America (CDC, 2003). Founded in 2003, Parent to Parent USA provides support nationwide to families with special-needs children. The non-profit organization matches parents who need assistance with a trained volunteer support parent. The volunteer helps the family develop coping skills, connects them with community resources and provides guidance for navigating the health-care system. It is from these support groups that parents fully support the schooling of their children with disabilities through the knowledge and confidence they derive from being members of support groups.

Disability, therefore, remains an important issue to be tackled both in terms of access to school and progression through to successful completion of basic education. In some cases, parental attitudes towards children with disability exacerbate their discrimination in schools. Miles (1983) observes that where parental attitude towards their children with disabilities is negative their chances of attending school are reduced. This paper uses logit regression analysis to identify factors that determine school attendance of children living with disability in Zimbabwe.

### **The Logit model**

Logit regression analysis is a multivariate technique, which allows for estimating the probability that a child is in school or not by a binary dependent outcome from a set of independent variables. In our case, the dependent is child's school attendance or not in relation to independent variables.

The probability ( $P_i$ ) that the child living with disability is attending school is given by

$$P_i = \frac{\exp(Z_i)}{1 + \exp(Z_i)} \text{ where } Z = B_1 + B_2X_i + B_3X_{2i} + \dots$$

Then  $(1 - P_i)$  that the child living with disability is not attending school is given by

$$1 - P_i = \frac{1}{1 + \exp(Z_i)}$$

Therefore, we can write  $\frac{P_i}{1 - P_i} = \frac{\exp(Z_i)}{1} \dots\dots\dots 1$

$\frac{P_i}{1 - P_i}$  is the odds ratio in favour of the child with disability being school, that is the ratio of the probability that the child with disability is attending school to the probability the child living disability is not in school. Taking natural log of equation 1 we obtain

$$L_i = \ln\left[\frac{P_i}{1 - P_i}\right] = Z = B_1 + B_2X_i + B_3X_{2i} \dots\dots\dots 2$$

The dependent variable was dichotomous assuming value 1 if the child going age child is in school and 0 if he/she is not. The covariates are as defined in Table 1:

### **Explanatory variables**

### **The research results**

Research results are presented in Table 2 and 3. Table 2 provides descriptive statistics, while Table 3 shows results from the logit regression model.



**Erratum**

The probability ( $P_i$ ) that the child living with disability is attending school is given by

$$\frac{1}{1 + \exp(-Zi)} \text{ where } Z = B_1 + B_2X_i + B_3X_{2i} + \dots$$

Then  $(1 - P_i)$  that the child living with disability is not attending school is given by

$$\frac{1}{1 + \exp(-Zi)} \qquad \frac{P_i}{1 - P_i} = \frac{1 + \exp(Zi)}{1 + \exp(-Zi)} \dots\dots\dots 1$$

Therefore, we can write

$\frac{P_i}{1 - P_i}$  is the odds ration in favour of the child with disability being school, that is the ratio of the probability that the child with disability is attending school to the probability the child living disability is not in school. Taking natural log of equation 1 we obtain

$$L_i = \ln \left[ \frac{P_i}{1 - P_i} \right] = Z = B_1 + B_2X_i + B_3X_{2i} \dots\dots\dots 2$$

The dependent variable was dichotomous assuming value 1 if the child going age child is in school and 0 if he/she is not. The covariates are as defined in

Table 1:

**Explanatory variables**

**The research results**

Research results are presented in Table 2 and 3. Table 2 provides descriptive statistics, while Table 3 shows results from the logit regression model.

Table 1

*Models Specification*

Variable	Variable description	Expected sign
Age	Age of the child with disability	
Hsize	Household size	
Gender	Gender of the child with disability	-
Diffmove	Difficulty to move (1 if yes, 0 otherwise)	-
Diffhear	Difficulty to hear (1 if yes, 0 otherwise)	-
Diffsee	Difficulty in seeing (1 if yes, 0 otherwise)	-
Diffspeak	Difficulty in speaking (1 if yes, 0 otherwise)	-
Difflearn	Difficulty in learning (1 if yes, 0 otherwise)	-
Mental	Child with mental illness (1 if yes, 0 otherwise)	-
Epilepsy	Fits or epilepsy (1 if yes, 0 otherwise)	+
Fatheratt	Father's attitude (1 if he accepted the disability, 0 otherwise)	-
Motheratt	mother's attitude (1 if he accepted the disability, 0 otherwise)	-
Assistive	Whether the child need assistive devices (1 if yes, 0 otherwise)	-
Own space	Whether the child has his own reading space (1 if yes, 0 otherwise)	+
Membership	Whether the parent is a member of support group (1 if he member of support group, 0 otherwise)	+

Table 2 shows that 46% of the children living with disability in our sample are not attending school. Of these 44% are males. On average there are 3.7 children within the families of people with disability. The mean age of children with disability from our sample is 12 years. The major disabilities identified include difficulties in learning,

moving, and speaking. Very few were blind, deaf and mentally challenged. Of these 71% required assistive devices.

Table  
*Descriptive statistics*

Variable	Mean/prop	Std deviation	Min	Max
School	0.5431	0.5003	0	1
Children	3.7759	1.9023	1	9
Age	12.3918	3.6445	6	20
Gender	0.4483	0.4995	0	1
Diffmove	0.5948	0.4931	0	1
Diffhear	0.1121	0.3168	0	1
Diffsee	0.1207	0.3272	0	1
Diffspeak	0.6552	0.4774	0	1
Difflearn	0.6034	0.4913	0	1
Epilepsy	0.2696	0.4457	0	1
Mental	0.1207	0.3272	0	1
Fatheratt	0.7679	0.4241	0	1
Assistive	0.7155	0.4531	0	1
Wealth index	3.5862	0.8853	1	5
Member	0.6121	0.4894	0	1
Setup	0.6638	0.4745	0	1

Table 3 shows that five variables significantly determine the probability of a child with disability to attend school. Gender of the child positively and significantly (at 10% level of significance)

determine the probability of a disabled child attending school. It therefore means that boys with disability have a higher chance of attending school compared to their female counterparts. The table also shows that ability to speak is negatively correlated to school attendance and the relationship is significant at 10% level of significance. It therefore means that of all forms of disability, inability to speak increases the chances of child not attending school.

Table 3

*Logit Regression Analysis*

Attend school	Coefficient	Standard Error	z	P> z	95% Conf. Interval	
Household size	-0.0599	0.1390	-0.430	0.666	-0.3323	0.2124
Gender	1.0529	0.5234	2.010	0.044	0.0270	2.0788
Moving	-0.7199	0.5920	-1.220	0.224	-1.8801	0.4403
Hearing	-0.3416	0.8637	-0.400	0.692	-2.0345	1.3512
Seeing	0.2899	0.8108	0.360	0.721	-1.2993	1.8791
Speaking	-1.4023	0.6923	-2.030	0.043	-2.7593	-0.0454
Learning	0.8533	0.5584	1.530	0.127	-0.2413	1.9478
Chronic	-0.6950	0.6065	-1.150	0.252	-1.8837	0.4938
Mental	-0.0475	0.8359	-0.060	0.955	-1.6859	1.5909
Father attitude	-1.1940	0.7027	-1.700	0.089	-2.5713	0.1832
Fee	-0.4462	0.5659	-0.780	0.437	-1.5493	0.6689
Assistive device	3.1182	0.7318	4.260	0.000	1.6838	4.5525
Wealth index	-0.3796	0.3759	-1.010	0.313	-1.1164	0.3572
Membership	1.6900	0.9333	1.810	0.070	-0.1393	3.5193
Setup	-0.1752	0.9765	-0.180	0.858	-2.0891	1.7388
_cons	0.3022	1.6200	0.19	0.852	-2.8731	3.4774

(Table 3 presents the results of the logit regression analysis.  
The pseudo  $R^2 = 38\%$ )

The relationship between access to assistive devices and enrolment is positive and very significant at 1% level of significance. Access to assistive devices increases the probability of a child with disability to attend school. Another variable that determine the probability of a child with disability enrolling in school is the father's attitude towards the child. Table 3 shows that the father's attitude is negatively correlated to the probability of a child with disability attending school and the relationship is significant at 10%. Membership to a support group is significant (at 10% level of significance) increases the probability of disabled child to attend school.

### **Discussion of results**

Girl children appear to be the most undervalued individual members of society. When it comes to basic education, the girl child is low on the list of priorities. The situation is even worse when the girl child is living with disability. The result of this study shows that disabled boys are prioritised over disabled girls for family expenditure on education. The girl child drive that was supported by government and donors in the early 1980s did not give special mention of girls living with disability. Although the Education Act of Zimbabwe provides for equal access to education in difficult times, parents often choose to send boys and non-disabled children to school at the expense of the girl child and those with disabilities (FMSI, 2011).

The results in Table 3 show that in Zimbabwe, children with difficulties in speaking are less likely to attend school. Moore-Brown et al. (2001) stress the importance of students' ability to participate in active and interactive communication with peers and teachers in an educational setting. They note problems with speech or language development can lead to difficulties in learning to listen, speak, read, or write. As a result, children with communication disorders perform poorly and struggle with reading, have difficulty understanding and expressing language, and also misunderstand social cues. Where this is the case, such children avoid attending school. This confirms the observation by Kurian (2000) that children with disability but able to speak have a better chance of being sent to

school and accepted for schooling. It was found by the same author that both their parents and school enrolment staff develop positive attitude towards them probably because of their ability to verbally communicate.

Logit regression results shows that in households where the father fails to accept his child's disability, chances of sending the child to school become very slim. This supports the finding by Dalal and Pandey (2004) that fathers are not even prepared to spend money on those children in which they believe lack clear social role functions. In India, Gupta and Singhal (2004) found out that disability is still viewed as a tragedy. The belief is that it is not possible for disabled people to be happy or enjoy a good quality of life. Lake and Billingsley (2000), blame the discrepancy between perfect child of their fantasy and the real child as the major cause for the negative attitudes among parents.

Support groups are important in ensuring that children with disability are sent to school. Members of the support group give each other support through community-based initiatives that seek to change the people's perceptions and attitude towards disability. The support group acts as a watchdog for the preservation and promotion of the children living with disability. John and Lakshmanan (2005) also found that social networks and such support systems help parents of the children living with disability to overcome the negative attitude towards such children. It is unfortunate that both the Education Act (2004) and the Disability Act of Zimbabwe, do not recognise a community centred approach in dealing with challenges that parents living with disability face.

Table 3 also shows that children without access to assistive devices are less likely to attend school. To enable some children with disability to attend school, they may require assistive devices include writing, reading, mathematics, studying or organising, listening and access to the curriculum (Bowser and Reed, 2000). Despite the fact that in Zimbabwe, most of the assistive devices are imported, there are no known subsidies on the acquisition of assistive devices for children with disabilities.

## **Recommendations**

It is imperative that the government puts disability on the national agenda in order to address challenges that are inhibiting children living with disability from attending school. Issues to be dealt in the national agenda should include; firstly, a Special Needs Education Act. The Act should give children with disability a legal right to education, with government having certain obligations to fulfil. Such an Act should be comprehensive, detailing who is responsible for what and who pays. Secondly, there is need to integrate the needs of children living with disability across ministries to make sure that each ministry has a department or section addressing the issue of disability and there should be a clear budget for that section. For example, the Ministry of Finance should promote the provision of aids/assistive devices, equipment and appliances for persons with disabilities to assist them to increase their level of independence and ability to become self-supporting. This can be done through the removal of all trade barriers in and customs duties on assistive devices. Ministry of Social Services should promote the formation of support groups by friends and even extended family members. Within the support groups, parents can discuss important emotional issues such as feeling of frustration and child rearing problems. Support groups also help parents to develop realistic expectation for the child.

## **Conclusion**

This paper has shown that promotion of the girl child living disability, attitude change of parents; availing assistive devices and the promotion of support networks for parents with children living with disability can greatly improve the school attendance rates of children living with disability in Zimbabwe. In Zimbabwe the provision of such services is unfortunately not housed in one ministry. In fact, there are no clear policies and laws on the education of children and adolescents with disabilities in Zimbabwe. There are a few policies that guide government departments to provide services to children and adolescents with disabilities. Unfortunately, these policies are not in the public domain, hence, parents and other

interested parties are not aware of them. It is for this reason that once the child has been identified by the clinic or hospital as having a disability, there are no clear-cut policies on what happens next.



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